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STREET DESIGN, REPORT NUMBER 3



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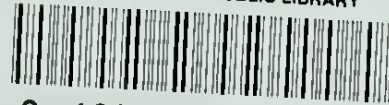
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D E V E L O P M E N T       P L A N  
REPORT NO. 3  
S T R E E T   A N D       S I D E W A L K  
D E S I G N       P R O P O S A L S

June 28, 1965

MARIO J. CIAMPI AND ASSOCIATES  
Architects and Urban Consultants

JOHN CARL WARNECKE AND ASSOCIATES  
Architects and Planning Consultants

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Market Street  
development plan,

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June 28, 1965

Mr. Thomas J. Mellon  
Chief Administrative Officer  
Room 289, City Hall  
San Francisco, California 94102

Dear Mr. Mellon:

Exploring the possibilities of widening the sidewalks on each side of Market Street to thirty-five feet to encourage excellence and facilitate the efficient movement of pedestrian traffic, has been accomplished by the City's Design Consultants. Your directive of March 29, 1965 and the request contained in paragraph five of a Declaration of Policy issued by the Board of Supervisors for the City and County of San Francisco, have been thoroughly examined and the attached report has been developed to achieve this objective.

Five short months were allocated to assemble, document and prepare data by the Urban Design Consultants. Supporting data and recommendations have been prepared and are included in the report to accomplish the basic street design and BARTD entrance locations on Market Street. Substantial unanimity exists between the Urban Consultants and the station architects of BARTD for the proposed subway entrances.

Action can now be taken on the basic problem of the street design and subway entrances to retain the Policy of the City of San Francisco, and allow BARTD to proceed. The Urban Consultants report evaluates all schemes but recommends that Scheme B be adopted to fulfill the established criteria.

Sincerely yours,

MARIO J. CIAMPI AND ASSOCIATES

MARIO J. CIAMPI

JOHN CARL WARNECKE AND ASSOCIATES

THOMAS H. CREIGHTON



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## CONCLUSIONS AND RECOMMENDATIONS

The following objectives are established for the purpose of evaluating the three proposals:

### BASIS FOR STREET DESIGN, STATION ENTRANCE LOCATION AND MEZZANINE DESIGN

The MARKET STREET DECISION is based upon two considerations:

THE WIDTH OF SIDEWALKS  
versus  
THE WIDTH OF VEHICULAR WAY

These two questions are based upon the following:

- A. PLANNING GOALS FOR MARKET STREET (10 POINT CRITERIA)
- B. PLANNING GOALS FOR CENTRAL BUSINESS DISTRICT
- C. ESTHETIC (DESIGN) CONSIDERATIONS
- D. ENVIRONMENTAL GOALS
- \*\*\*\* E. TRAFFIC GOALS/NEEDS -- IMMEDIATE; LONG RANGE
- F. ENGINEERING REQUIREMENTS -- PEDESTRIAN; VEHICULAR
- G. BARTD NEEDS -- IMMEDIATE; LONG RANGE

\*\*\*\* In order to design a great street as set forth in the 10 point criteria, it is especially important in evaluating the three basic proposals all aspects of concern be given their due consideration. It would be fallacious, indeed, to select any one scheme merely on the merits of the auto on Market Street to the exclusion of all other equally important areas of consideration. Any judgment of the proposals should recognize this question only as a component of all other objectives.





#### Evaluation of Design Proposal A

The comments made under the description of Proposal A indicate that it is NOT to be recommended. It does not adequately meet the objectives of the 10 point criteria, nor does it conform with the ultimate goals as set forth. The street design, because of its irregular pattern, limited pedestrian opportunity and continued traffic congestion, would hardly be described as bold and imaginative.

#### Evaluation of Design Proposal B

The observations made of this proposal reveal that the widening of sidewalks to 35 feet and provisions for 4 lanes of vehicular traffic is a highly desirable plan and therefore is recommended by the Urban Consultants. The general plan, as well as the detailed design plan in the Powell Station area, indicates the potential for the development of a very handsome street. Many of the details of surface transit in its relationship to the Municipal Railway Study and Parking Study can be further considered for this plan. The interim construction plan will provide opportunity for testing some of these possibilities. Scheme B has the approval of Alan Voorhees and Associates, Traffic Consultants, and the supervising and station architects for Rapid Transit.



### Evaluation of Design Proposal C

An analysis of this proposal to develop a completely mass transit and pedestrian street requires further study and therefore is NOT recommended by the Urban Consultants. While this proposal has been misunderstood as a "mall" instead of a tri-level transit street, its great potential should not be underestimated. The final determination to adopt this proposal should not be concluded until the Municipal Railway, Parking and the Servicing-Delivery Study are completed. The interim construction plan, functional characteristics of surface transit vehicles, transfer techniques and other concerns are all a part of this consideration.

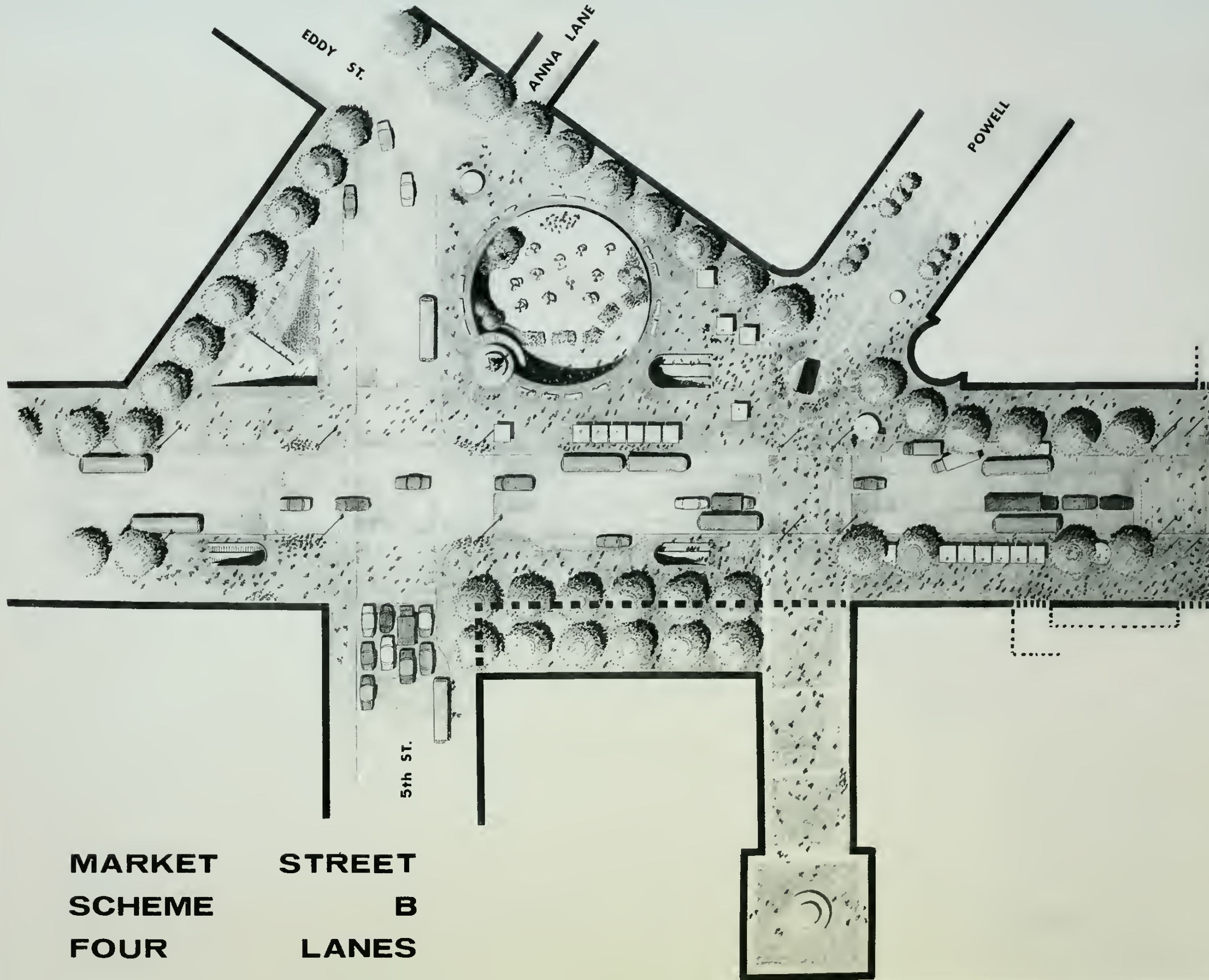


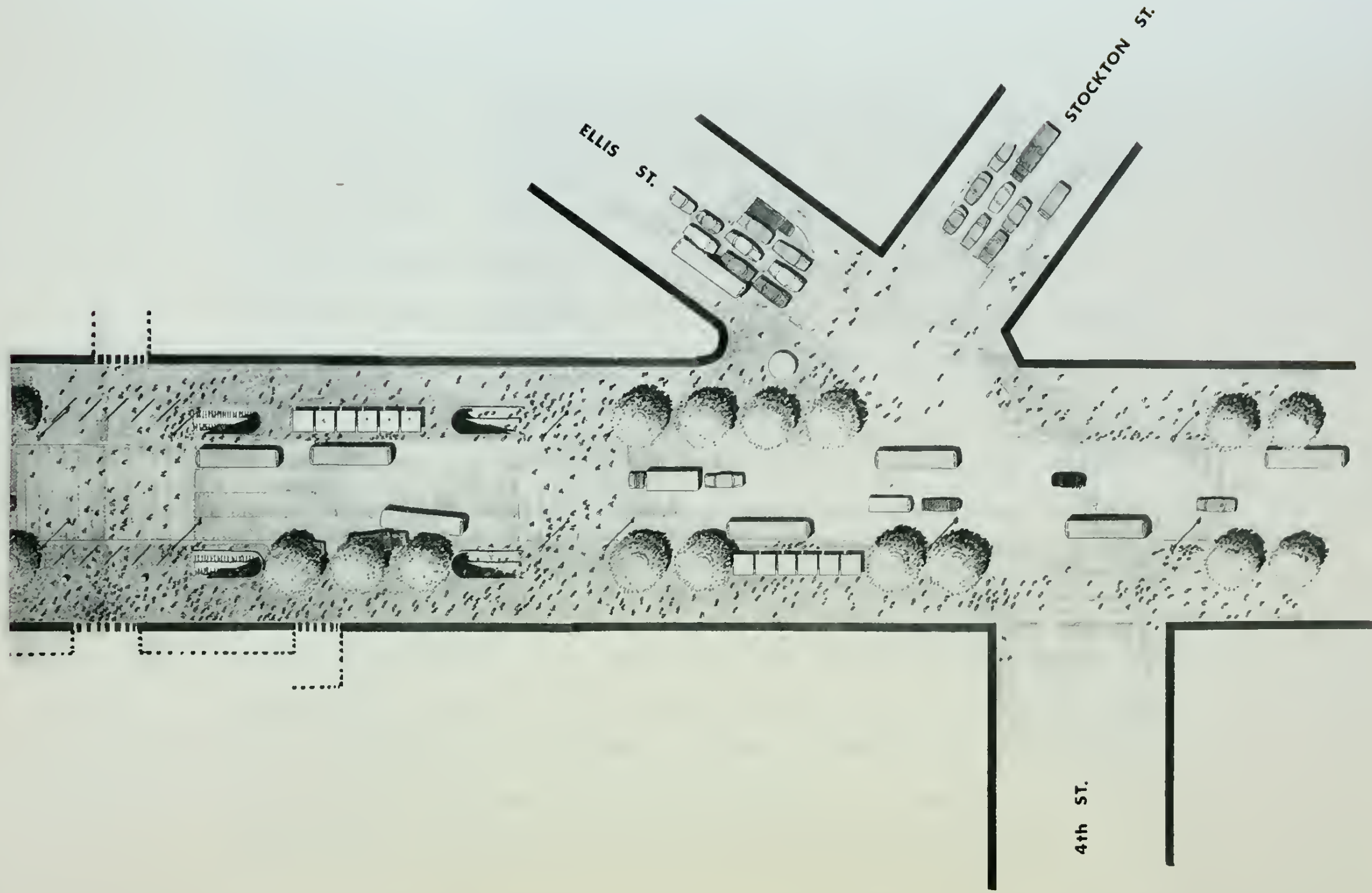


S C H E M E    B













## USES OF MARKET STREET

Uses of a street are as infinite and varied as the purposes of the people who use it and the uses of the buildings which line the street. On any weekday the casual visitor to Market Street will see seemingly endless streams of shoppers hurrying about their respective errands, businessmen walking to meetings in near-by buildings, a wide variety of trucks delivering everything from doughnuts to office furniture, buses, streetcars, police cars, taxis, private automobiles and perhaps a fire engine.

Toward early evening -- beginning around 3:30 p.m. -- the purposes of the street users begin to merge toward one common goal: getting home. Within a short time the sidewalks fill with people streaming from adjacent buildings and buses and streetcars crowd the street in the gigantic effort to carry the people to their homes. It is during this peak evening rush hour that the never-ending conflicts between pedestrians, automobiles, buses and streetcar movements become most apparent. A bus making a turning movement is blocked by a car and in turn blocks other cars which block other buses. A streetcar can't move forward because a truck blocks part of its right of way, and so it goes.

The daily pattern of movement on Market Street is complex; so intricate that to



understand it we are forced to take it apart and look at the major components analyzing their relative value and role in maintaining the vital functions of the downtown and, specifically, of Market Street. Pedestrian, bus and streetcar, and private automobile traffic will each be examined separately so that we may compare them.

The graphics show the following:

- A. Planned and proposed freeways will create an enormous increase in traffic into the downtown area.
- B. BARTD will reduce the 24 hour traffic volumes, but its significant contribution lies in the following:
  - 1. By 1970 BARTD will absorb approximately two thirds of peak hour inter-urban movements. In some cases 75% will be asorbed.
  - 2. BARTD will provide an efficient alternative for persons whose destinations are in congested districts. Without this alternative the automobile would be mandatory for many -- with BARTD a choice is available for the commuter, shopper and traveler.
- C. The greatest increase in automotive traffic will be from south of Market.
  - 1. Topography and present street capacities favor the south of Market area for future traffic growth.





2. North of Market has existing high levels of congestion, narrower streets and hills to contend with.
  3. Existing and planned freeways will provide the bulk of their access and egress ramps south of Market.
- D. Improved rapid and mass transit facilities can absorb a major portion of the projected trips from the west into downtown. The future freeways would accommodate a large portion of the population increase.
- E. The existing levels of street congestion during peak hours indicates that the number of automobiles penetrating the core area cannot be significantly increased without extensive and costly urban surgery (possibly damaging) and that increasingly in the future we must look to placing parking on the periphery of the core area -- making it attractive by providing convenient transportation into the heart of the core by mini-bus or other devices.
- F. The implication for Market Street is that the long range solution of San Francisco's traffic problems does not lie in increasing traffic volumes in the heart of the core area, but rather in solving the problem in the fringe areas on the north and particularly on the south of Market Street.
- G. On Market Street today we find that the following relationships are attained:
1. A count conducted by the Municipal Railway at 5th and Market shows that

THE HISTORY OF THE UNITED STATES OF AMERICA

|      |                |                                   |      |                |                                   |
|------|----------------|-----------------------------------|------|----------------|-----------------------------------|
| 1776 | July 4th       | Declaration of Independence       | 1776 | September 26th | Constitution of the United States |
| 1787 | September 17th | Constitution of the United States | 1789 | September 17th | Bill of Rights                    |
| 1791 | September 17th | Bill of Rights                    | 1793 | September 17th | Constitution of the United States |
| 1796 | September 17th | Constitution of the United States | 1799 | September 17th | Bill of Rights                    |
| 1800 | September 17th | Constitution of the United States | 1803 | September 17th | Bill of Rights                    |
| 1804 | September 17th | Constitution of the United States | 1807 | September 17th | Bill of Rights                    |
| 1812 | September 17th | Constitution of the United States | 1815 | September 17th | Bill of Rights                    |
| 1817 | September 17th | Constitution of the United States | 1820 | September 17th | Bill of Rights                    |
| 1823 | September 17th | Constitution of the United States | 1826 | September 17th | Bill of Rights                    |
| 1829 | September 17th | Constitution of the United States | 1832 | September 17th | Bill of Rights                    |
| 1835 | September 17th | Constitution of the United States | 1838 | September 17th | Bill of Rights                    |
| 1841 | September 17th | Constitution of the United States | 1844 | September 17th | Bill of Rights                    |
| 1847 | September 17th | Constitution of the United States | 1850 | September 17th | Bill of Rights                    |
| 1853 | September 17th | Constitution of the United States | 1856 | September 17th | Bill of Rights                    |
| 1859 | September 17th | Constitution of the United States | 1862 | September 17th | Bill of Rights                    |
| 1865 | September 17th | Constitution of the United States | 1868 | September 17th | Bill of Rights                    |
| 1870 | September 17th | Constitution of the United States | 1873 | September 17th | Bill of Rights                    |
| 1876 | September 17th | Constitution of the United States | 1879 | September 17th | Bill of Rights                    |
| 1881 | September 17th | Constitution of the United States | 1884 | September 17th | Bill of Rights                    |
| 1887 | September 17th | Constitution of the United States | 1890 | September 17th | Bill of Rights                    |
| 1893 | September 17th | Constitution of the United States | 1896 | September 17th | Bill of Rights                    |
| 1899 | September 17th | Constitution of the United States | 1902 | September 17th | Bill of Rights                    |
| 1905 | September 17th | Constitution of the United States | 1908 | September 17th | Bill of Rights                    |
| 1911 | September 17th | Constitution of the United States | 1914 | September 17th | Bill of Rights                    |
| 1917 | September 17th | Constitution of the United States | 1920 | September 17th | Bill of Rights                    |
| 1923 | September 17th | Constitution of the United States | 1926 | September 17th | Bill of Rights                    |
| 1929 | September 17th | Constitution of the United States | 1932 | September 17th | Bill of Rights                    |
| 1935 | September 17th | Constitution of the United States | 1938 | September 17th | Bill of Rights                    |
| 1941 | September 17th | Constitution of the United States | 1944 | September 17th | Bill of Rights                    |
| 1947 | September 17th | Constitution of the United States | 1950 | September 17th | Bill of Rights                    |
| 1953 | September 17th | Constitution of the United States | 1956 | September 17th | Bill of Rights                    |
| 1959 | September 17th | Constitution of the United States | 1962 | September 17th | Bill of Rights                    |
| 1965 | September 17th | Constitution of the United States | 1968 | September 17th | Bill of Rights                    |
| 1971 | September 17th | Constitution of the United States | 1974 | September 17th | Bill of Rights                    |
| 1977 | September 17th | Constitution of the United States | 1980 | September 17th | Bill of Rights                    |
| 1983 | September 17th | Constitution of the United States | 1986 | September 17th | Bill of Rights                    |
| 1989 | September 17th | Constitution of the United States | 1992 | September 17th | Bill of Rights                    |
| 1995 | September 17th | Constitution of the United States | 1998 | September 17th | Bill of Rights                    |
| 2001 | September 17th | Constitution of the United States | 2004 | September 17th | Bill of Rights                    |
| 2007 | September 17th | Constitution of the United States | 2010 | September 17th | Bill of Rights                    |
| 2013 | September 17th | Constitution of the United States | 2016 | September 17th | Bill of Rights                    |
| 2019 | September 17th | Constitution of the United States | 2022 | September 17th | Bill of Rights                    |

at all periods of the day from 7:00 a.m. to 6:00 p.m. buses and streetcars separately carry more persons than autos. At peak hours autos carry as little as 5% of buses and streetcars combined. At the lowest ebb of bus and streetcar patronage at 10:30 a.m. to 11:00 a.m. autos still only carry 28% of bus and streetcar combined patronage.

2. Pedestrian counts along Market Street show that pedestrian volumes exceed persons in autos from roughly 7th Street eastward to the Ferry Building. Between 4th and 5th Streets, pedestrian volumes are as much as 6 times or more than persons in autos. This was true for all periods of the day that pedestrian volumes were recorded.

NOTE: Our drawings show relative volumes for peak evening hour only as it best demonstrates the critical condition. It should be pointed out that while during off-peak hours bus and streetcar volumes drop sharply, pedestrian volumes drop very moderately and at some points actually increase.

- H. Looking ahead to the future usage of Market Street we find many radical changes. The most outstanding is that the greatest volume of persons will be moving underground in the BARTD and Muni subways. The impact of these systems (other than during the construction stage) is the number of persons



using their Market Street stations; persons traveling through will obviously have no impact on Market Street. In the near future entering and leaving downtown San Francisco will be concentrated along Market Street at five terminals.

Persons using all three BARTD Market Street stations are projected by BARTD as follows:\*

|      |         |       |        |       |
|------|---------|-------|--------|-------|
| 1975 | 120,000 | daily | person | trips |
| 1985 | 130,000 | "     | "      | "     |
| 2000 | 325,000 | "     | "      | "     |

\*based on annual average weekday

While the bulk of transit users will be going to destinations off Market Street and will not add to its pedestrian volumes, it does seem reasonable to assume that 15% - 20% of Rapid Transit users will use a portion of Market Street for their journey to work. BARTD will eventually have a tremendous impact on land use along Market Street. Future development of office space along and south of Market Street will eventually result in an increase in pedestrian activity along the street.

We must all certainly agree that BARTD and Municipal Railway under Market Street are going to INCREASE pedestrian activity on Market Street.





The increase in pedestrian activity along Market Street will vary from block to block, point to point. Within the next 25 years we should look forward to and plan for increases from 20% to 100% depending on location. It is our OPINION that the data presented represents reasonable expectations and that to plan for less would be extremely unwise. We feel it is essential to take into consideration what we want Market Street to be -- the goals for the development of Market Street -- and its desired future role in the downtown area as well as strictly mechanical projections. The established goals of the City is for Market Street to be a great street and to be the heart of the downtown rather than a margin. This is clearly set forth in the 10 point criteria. Surface transit is assumed to remain at approximately its present volumes. If we do not plan now for this goal, we will not achieve it.

- I. What does our examination of present day usage and future usage of Market Street tell us? The following conclusions can be drawn.
  1. Presently the auto carries the least number of persons on an hourly and 24 hour basis. It is less important than bus, streetcar or pedestrian modes of transportation.
  2. In the future (in 1975, assuming a 20% increase in keeping with average

|   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |    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185 | 186 | 187 | 188 | 189 | 190 | 191 | 192 | 193 | 194 | 195 | 196 | 197 | 198 | 199 | 200 | 201 | 202 | 203 | 204 | 205 | 206 | 207 | 208 | 209 | 210 | 211 | 212 | 213 | 214 | 215 | 216 | 217 | 218 | 219 | 220 | 221 | 222 | 223 | 224 | 225 | 226 | 227 | 228 | 229 | 230 | 231 | 232 | 233 | 234 | 235 | 236 | 237 | 238 | 239 | 240 | 241 | 242 | 243 | 244 | 245 | 246 | 247 | 248 | 249 | 250 | 251 | 252 | 253 | 254 | 255 | 256 | 257 | 258 | 259 | 260 | 261 | 262 | 263 | 264 | 265 | 266 | 267 | 268 | 269 | 270 | 271 | 272 | 273 | 274 | 275 | 276 | 277 | 278 | 279 | 280 | 281 | 282 | 283 | 284 | 285 | 286 | 287 | 288 | 289 | 290 | 291 | 292 | 293 | 294 | 295 | 296 | 297 | 298 | 299 | 300 | 301 | 302 | 303 | 304 | 305 | 306 | 307 | 308 | 309 | 310 | 311 | 312 | 313 | 314 | 315 | 316 | 317 | 318 | 319 | 320 | 321 | 322 | 323 | 324 | 325 | 326 | 327 | 328 | 329 | 330 | 331 | 332 | 333 | 334 | 335 | 336 | 337 | 338 | 339 | 340 | 341 | 342 | 343 | 344 | 345 | 346 | 347 | 348 | 349 | 350 | 351 | 352 | 353 | 354 | 355 | 356 | 357 | 358 | 359 | 360 | 361 | 362 | 363 | 364 | 365 | 366 | 367 | 368 | 369 | 370 | 371 | 372 | 373 | 374 | 375 | 376 | 377 | 378 | 379 | 380 | 381 | 382 | 383 | 384 | 385 | 386 | 387 | 388 | 389 | 390 | 391 | 392 | 393 | 394 | 395 | 396 | 397 | 398 | 399 | 400 | 401 | 402 | 403 | 404 | 405 | 406 | 407 | 408 | 409 | 410 | 411 | 412 | 413 | 414 | 415 | 416 | 417 | 418 | 419 | 420 | 421 | 422 | 423 | 424 | 425 | 426 | 427 | 428 | 429 | 430 | 431 | 432 | 433 | 434 | 435 | 436 | 437 | 438 | 439 | 440 | 441 | 442 | 443 | 444 | 445 | 446 | 447 | 448 | 449 | 450 | 451 | 452 | 453 | 454 | 455 | 456 | 457 | 458 | 459 | 460 | 461 | 462 | 463 | 464 | 465 | 466 | 467 | 468 | 469 | 470 | 471 | 472 | 473 | 474 | 475 | 476 | 477 | 478 | 479 | 480 | 481 | 482 | 483 | 484 | 485 | 486 | 487 | 488 | 489 | 490 | 491 | 492 | 493 | 494 | 495 | 496 | 497 | 498 | 499 | 500 | 501 | 502 | 503 | 504 | 505 | 506 | 507 | 508 | 509 | 510 | 511 | 512 | 513 | 514 | 515 | 516 | 517 | 518 | 519 | 520 | 521 | 522 | 523 | 524 | 525 | 526 | 527 | 528 | 529 | 530 | 531 | 532 | 533 | 534 | 535 | 536 | 537 | 538 | 539 | 540 | 541 | 542 | 543 | 544 | 545 | 546 | 547 | 548 | 549 | 550 | 551 | 552 | 553 | 554 | 555 | 556 | 557 | 558 | 559 | 560 | 561 | 562 | 563 | 564 | 565 | 566 | 567 | 568 | 569 | 570 | 571 | 572 | 573 | 574 | 575 | 576 | 577 | 578 | 579 | 580 | 581 | 582 | 583 | 584 | 585 | 586 | 587 | 588 | 589 | 590 | 591 | 592 | 593 | 594 | 595 | 596 | 597 | 598 | 599 | 600 | 601 | 602 | 603 | 604 | 605 | 606 | 607 | 608 | 609 | 610 | 611 | 612 | 613 | 614 | 615 | 616 | 617 | 618 | 619 | 620 | 621 | 622 | 623 | 624 | 625 | 626 | 627 | 628 | 629 | 630 | 631 | 632 | 633 | 634 | 635 | 636 | 637 | 638 | 639 | 640 | 641 | 642 | 643 | 644 | 645 | 646 | 647 | 648 | 649 | 650 | 651 | 652 | 653 | 654 | 655 | 656 | 657 | 658 | 659 | 660 | 661 | 662 | 663 | 664 | 665 | 666 | 667 | 668 | 669 | 670 | 671 | 672 | 673 | 674 | 675 | 676 | 677 | 678 | 679 | 680 | 681 | 682 | 683 | 684 | 685 | 686 | 687 | 688 | 689 | 690 | 691 | 692 | 693 | 694 | 695 | 696 | 697 | 698 | 699 | 700 | 701 | 702 | 703 | 704 | 705 | 706 | 707 | 708 | 709 | 710 | 711 | 712 | 713 | 714 | 715 | 716 | 717 | 718 | 719 | 720 | 721 | 722 | 723 | 724 | 725 | 726 | 727 | 728 | 729 | 730 | 731 | 732 | 733 | 734 | 735 | 736 | 737 | 738 | 739 | 740 | 741 | 742 | 743 | 744 | 745 | 746 | 747 | 748 | 749 | 750 | 751 | 752 | 753 | 754 | 755 | 756 | 757 | 758 | 759 | 760 | 761 | 762 | 763 | 764 | 765 | 766 | 767 | 768 | 769 | 770 | 771 | 772 | 773 | 774 | 775 | 776 | 777 | 778 | 779 | 780 | 781 | 782 | 783 | 784 | 785 | 786 | 787 | 788 | 789 | 790 | 791 | 792 | 793 | 794 | 795 | 796 | 797 | 798 | 799 | 800 | 801 | 802 | 803 | 804 | 805 | 806 | 807 | 808 | 809 | 810 | 811 | 812 | 813 | 814 | 815 | 816 | 817 | 818 | 819 | 820 | 821 | 822 | 823 | 824 | 825 | 826 | 827 | 828 | 829 | 830 | 831 | 832 | 833 | 834 | 835 | 836 | 837 | 838 | 839 | 840 | 841 | 842 | 843 | 844 | 845 | 846 | 847 | 848 | 849 | 850 | 851 | 852 | 853 | 854 | 855 | 856 | 857 | 858 | 859 | 860 | 861 | 862 | 863 | 864 | 865 | 866 | 867 | 868 | 869 | 870 | 871 | 872 | 873 | 874 | 875 | 876 | 877 | 878 | 879 | 880 | 881 | 882 | 883 | 884 | 885 | 886 | 887 | 888 | 889 | 890 | 891 | 892 | 893 | 894 | 895 | 896 | 897 | 898 | 899 | 900 | 901 | 902 | 903 | 904 | 905 | 906 | 907 | 908 | 909 | 910 | 911 | 912 | 913 | 914 | 915 | 916 | 917 | 918 | 919 | 920 | 921 | 922 | 923 | 924 | 925 | 926 | 927 | 928 | 929 | 930 | 931 | 932 | 933 | 934 | 935 | 936 | 937 | 938 | 939 | 940 | 941 | 942 | 943 | 944 | 945 | 946 | 947 | 948 | 949 | 950 | 951 | 952 | 953 | 954 | 955 | 956 | 957 | 958 | 959 | 960 | 961 | 962 | 963 | 964 | 965 | 966 | 967 | 968 | 969 | 970 | 971 | 972 | 973 | 974 | 975 | 976 | 977 | 978 | 979 | 980 | 981 | 982 | 983 | 984 | 985 | 986 | 987 | 988 | 989 | 990 | 991 | 992 | 993 | 994 | 995 | 996 | 997 | 998 | 999 | 1000 | 1001 | 1002 | 1003 | 1004 | 1005 | 1006 | 1007 | 1008 | 1009 | 1010 | 1011 | 1012 | 1013 | 1014 | 1015 | 1016 | 1017 | 1018 | 1019 | 1020 | 1021 | 1022 | 1023 | 1024 | 1025 | 1026 | 1027 | 1028 | 1029 | 1030 | 1031 | 1032 | 1033 | 1034 | 1035 | 1036 | 1037 | 1038 | 1039 | 1040 | 1041 | 1042 | 1043 | 1044 | 1045 | 1046 | 1047 | 1048 | 1049 | 1050 | 1051 | 1052 | 1053 | 1054 | 1055 | 1056 | 1057 | 1058 | 1059 | 1060 | 1061 | 1062 | 1063 | 1064 | 1065 | 1066 | 1067 | 1068 | 1069 | 1070 | 1071 | 1072 | 1073 | 1074 | 1075 | 1076 | 1077 | 1078 | 1079 | 1080 | 1081 | 1082 | 1083 | 1084 | 1085 | 1086 | 1087 | 1088 | 1089 | 1090 | 1091 | 1092 | 1093 | 1094 | 1095 | 1096 | 1097 | 1098 | 1099 | 1100 | 1101 | 1102 | 1103 | 1104 | 1105 | 1106 | 1107 | 1108 | 1109 | 1110 | 1111 | 1112 | 1113 | 1114 | 1115 | 1116 | 1117 | 1118 | 1119 | 1120 | 1121 | 1122 | 1123 | 1124 | 1125 | 1126 | 1127 | 1128 | 1129 | 1130 | 1131 | 1132 | 1133 | 1134 | 1135 | 1136 | 1137 | 1138 | 1139 | 1140 | 1141 | 1142 | 1143 | 1144 | 1145 | 1146 | 1147 | 1148 | 1149 | 1150 | 1151 | 1152 | 1153 | 1154 | 1155 | 1156 | 1157 | 1158 | 1159 | 1160 | 1161 | 1162 | 1163 | 1164 | 1165 | 1166 | 1167 | 1168 | 1169 | 1170 | 1171 | 1172 | 1173 | 1174 | 1175 | 1176 | 1177 | 1178 | 1179 | 1180 | 1181 | 1182 | 1183 | 1184 | 1185 | 1186 | 1187 | 1188 | 1189 | 1190 | 1191 | 1192 | 1193 | 1194 | 1195 | 1196 | 1197 | 1198 | 1199 | 1200 | 1201 | 1202 | 1203 | 1204 | 1205 | 1206 | 1207 | 1208 | 1209 | 1210 | 1211 | 1212 | 1213 | 1214 | 1215 | 1216 | 1217 | 1218 | 1219 | 1220 | 1221 | 1222 | 1223 | 1224 | 1225 | 1226 | 1227 | 1228 | 1229 | 1230 | 1231 | 1232 | 1233 | 1234 | 1235 | 1236 | 1237 | 1238 | 1239 | 1240 | 1241 | 1242 | 1243 | 1244 | 1245 | 1246 | 1247 | 1248 | 1249 | 1250 | 1251 | 1252 | 1253 | 1254 | 1255 | 1256 | 1257 | 1258 | 1259 | 1260 | 1261 | 1262 | 1263 | 1264 | 1265 | 1266 | 1267 | 1268 | 1269 | 1270 | 1271 | 1272 | 1273 | 1274 | 1275 | 1276 | 1277 | 1278 | 1279 | 1280 | 1281 | 1282 | 1283 | 1284 | 1285 | 1286 | 1287 | 1288 | 1289 | 1290 | 1291 | 1292 | 1293 | 1294 | 1295 | 1296 | 1297 | 1298 | 1299 | 1300 | 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1444 | 1445 | 1446 | 1447 | 1448 | 1449 | 1450 | 1451 | 1452 | 1453 | 1454 | 1455 | 1456 | 1457 | 1458 | 1459 | 1460 | 1461 | 1462 | 1463 | 1464 | 1465 | 1466 | 1467 | 1468 | 1469 | 1470 | 1471 | 1472 | 1473 | 1474 | 1475 | 1476 | 1477 | 1478 | 1479 | 1480 | 1481 | 1482 | 1483 | 1484 | 1485 | 1486 | 1487 | 1488 | 1489 | 1490 | 1491 | 1492 | 1493 | 1494 | 1495 | 1 |
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of 2% yearly traffic growth in San Francisco) the automobile still would be less important than surface transit and pedestrian traffic. (As a major shopping and business street pedestrian requirements shown take precedence even if relatively less.) The volume of pedestrians brought to the street by mass transit is more efficient than the automobile.

3. The net conclusion to be derived is a matter of priority. First in priority are pedestrians, second is surface transit and third, the private automobile. Thus, in order to provide for the optimum desirable functional level of pedestrians and surface transit additional space is needed, it should be preempted from the private automobile.

J. Delivery and service needs are vital to the proper functioning of Market Street. There is currently a servicing problem on Market Street affecting many of the stores and buildings along the street. A store-by-store, building-by-building survey indicates that this problem can be largely eliminated by the proper use of existing alleyways and adjoining streets. The majority of the buildings in which individual stores are located can presently be serviced off of Market Street. Many problem buildings will vanish with new construction and redevelopment. While a long range goal



should be planned for the elimination of on Market Street deliveries, it is felt the hard core problem stores and buildings can be handled on an interim basis either through special loading areas and/or phasing of delivery periods. Our preliminary examination of the problem indicates that a satisfactory solution can be achieved for the immediate and long range development. The foregoing points A through J have briefly considered the technical aspects of Market Street. In our involvement with the mass of intricate technical problems we must not neglect the equally, if not more important, community values and community goals for Market Street. What Market Street should be, what image it must have, also have vital practical consequences for the City. Indeed these considerations must have their just priority.

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PROPOSED FUNCTIONAL NEEDS AND AMENITIES BASIC TO THE DESIGN OF  
MARKET STREET

Height limit and zoning control of activity areas  
Newsstands -- at each surface transit stop  
Central information bureau in Powell Plaza  
Information booths -- at intervals along the street  
Flower stands -- near major crosswalks and focal points  
Telephone booths and waste receptacles -- at surface transit stops  
Kiosks (for services) faced with announcements and daily events  
Rest areas with appropriate furniture  
Controlled signs and graphics, public and private  
Servicing zones for deliveries and goods  
Drinking fountains  
Surface transit, station shelters  
Trees and floral displays, planting areas -- permanent and seasonal  
Flags and pennants  
Pavement design for sidewalks and plazas, fountains and statues  
Street illumination; special lighting of trees and other features

Special Events lending character to the street

Art exhibits and sale of art  
Special merchants street events (entertainments, festivals, etc.)  
Limited street vending -- candy, chestnuts, pretzels, etc.  
Seasonal street decorations and special events  
Yearly Market Street Festival -- similar to New Orleans Mardi Gras,  
Philadelphia's Mummers' Day, New York's Thanksgiving Day, etc.  
Parades and Civic Ceremonies  
Music at Powell Plaza, Zellerbach Plaza and Union Square



## DESIGN CRITERIA FOR MARKET STREET DEVELOPMENT PLAN

President Johnson

"OUR SOCIETY WILL NEVER BE GREAT UNTIL OUR CITIES ARE GREAT."

Mayor Shelley, July 10, 1964

"WHY CANNOT WE HAVE A GREAT MARKET STREET: A MAGNIFICENT PLACE AS BEAUTIFUL AS OUR HILLS AND OUR BAY, A PLACE PEOPLE WILL COME FROM ALL OVER THE WORLD TO SEE?"

Board of Supervisors

Excerpts from "Declaring Policies of the City and County of San Francisco for Market Street" March 29, 1965

- I THE INTEGRATION OF THE RAPID TRANSIT SYSTEM INTO THE PHYSICAL, ECONOMIC AND SOCIAL FABRIC OF THE DOWNTOWN AREA AND THE ENTIRE COMMUNITY.
- II THE COMPLETE AND ORDERLY DEVELOPMENT OF THE DOWNTOWN AREA BY PROVIDING A MEANS OF UNITING THE HIGHLY DEVELOPED LAND AREAS NORTH OF MARKET STREET TO THOSE LAND AREAS SOUTH OF MARKET STREET THAT POSSESS GREAT DEVELOPMENT POTENTIAL WHICH MUST BE REALIZED AS BEING VITALLY NECESSARY TO THE EXPANSION OF OUR COMMERCIAL AND INDUSTRIAL ECONOMY AND TO INCREASE THE CITY'S TAX BASE.
- III THE DESIGNING OF THE STATION ENTRANCES AND MEZZANINES AND RELATION OF THEM TO THE SURFACE OF MARKET STREET IN A MANNER WHICH WILL PERMIT COMPLETE COORDINATION OF ACTIVITIES AND WILL REDUCE TO A MINIMUM CONFLICTS BETWEEN AND DISRUPTION TO VEHICULAR AND PEDESTRIAN MOVEMENTS IN THE DOWNTOWN BUSINESS-RETAIL-FINANCIAL COMPLEX.

THE BOARD OF SUPERVISORS BELIEVES THAT THE MARKET STREET SIDEWALK SHOULD BE WIDENED TO APPROXIMATELY THIRTY-FIVE FEET TO ENCOURAGE DESIGN EXCELLENCE AND TO FACILITATE THE EFFICIENT MOVEMENT OF PEDESTRIAN TRAFFIC.



THE FOLLOWING 10 POINT CRITERIA PREPARED BY THE URBAN DESIGN CONSULTANTS IS PREDICATED UPON THE FOREGOING DIRECTIVES.

The historic concept of Market Street is one of a great thoroughfare that is the unifying element in the most important cultural - economic center in the Bay Area. The street provides a gateway to the Waterfront and access to the financial center, retail core, commercial amusement center and Civic Center. In recent years, this concept has been more traditional than factual, as the most important activities of the street have shifted to other areas of downtown. Market Street remains, however, the common link between all of these areas and retains the potential to be once again the focus of all metropolitan activity.

The nearing reality of subway construction makes dramatic change on the street inevitable and close at hand. Market Street will serve as the backbone of the Bay Area's public transportation system.

The primary purpose of all work and planning is to make a Market Street that is befitting the heart of the Bay Region and the City of San Francisco.

To realize its great potential, it is essential that the following objectives be obtained:

1. Business -- Market Street must become a strong vital commercial and



business street -- the true heart of a unified downtown rather than an edge of the commercial, business and entertainment areas.

2. Pedestrian Circulation -- To strengthen commercial and business activity along the street, pedestrian circulation should be concentrated on the surface of the street, not diluted by competing activity underground. The pedestrian should not be required to use less desirable underground passageways because of surface congestion. Mezzanine areas should be placed as near the surface as possible for underpass and access to trains primarily. Since the City enjoys excellent climate, the street would in effect become a 9000 foot grand terminal concourse providing mezzanine centers serving the five stations.
3. Surface Treatment -- To facilitate pedestrian movement, well designed sidewalks and frequent spacious crosswalks should be provided with beautiful plazas constructed at appropriate locations in scale with civic needs. Adequate space must be available to permit the development of rich and varied street activity and appropriate landscaping.
4. Transit -- This three level mass transit system should be carefully coordinated into a unified operation with a minimum of interference. A quick, convenient and pleasant surface transportation system along the





length of downtown Market Street with efficient and easy access to and from BARTD and Muni subway stations is needed.

5. Autos -- The relationship of the auto to the pedestrian on Market Street must be carefully evaluated. Vehicular traffic crossing Market Street should be so organized as to cause minimal delay to pedestrians and surface transit vehicles using Market Street, yet serve to strengthen the union of the south of Market Street area with the north side of the City. Adequate parking centers should be conveniently located on both sides of the street.
6. Safety -- For the safety and welfare of the citizens, hard-to-police underground passageways should be avoided wherever possible. Such underground spaces as are required should be open and spacious permitting easy surveillance as well as providing a pleasing environment.
7. Service -- For the optimum operating conditions of the street and businesses fronting the street, delivery and service facilities should be developed onto rear alleyways and adjacent streets wherever possible. To guide and assist building owners and businesses in obtaining the best delivery and service system, a long range detailed plan considering the needs of Market Street businesses is necessary.
8. Utilities -- Utilities must be placed to complement the elegance of surface



and subterranean spatial experience. Vehicular and pedestrian traffic disruption during normal service and repair should be avoided.

9. Phasing -- The design plan for Market Street should anticipate and provide for the orderly phasing of future development and be merged with an overall plan for the downtown area. The subway construction phase is an essential and integral part of plan phasing. Other aspects of development which require acquisition of additional lands, new modes of transportation and changing character of urban environment should be carefully considered.
10. Future -- The street should meet the immediate needs but also anticipate the future growth in the years 1985-2000. The adoption of a bold and imaginative plan for the design of the street, striving for urban magnificence, is the basic challenge.



## TRAFFIC AND TRANSPORTATION CONSULTANT

While the City Traffic and Engineering Department have rendered every assistance to provide data for this study, it was decided that additional assistance in this extremely complex area of traffic planning would be most helpful toward a logical solution to the problem.

The firm of Alan Voorhees and Associates, a nationally distinguished organization of traffic consultants, has been retained by the Urban Consultants to participate in the development of the three design plans. Their opinions and recommendations are incorporated in the various proposals.

The evaluation of the three proposals were then made in consultation with the traffic consultants, and the final recommendation of the Urban Consultants in its selection of the most appropriate proposal has the approval of these traffic consultants.





Excerpts from letter dated June 22, 1965 to Mr. S. Myron Tatarian written by the Urban Design Consultants.

1. The plaza locations are simply suggested possibilities based on studies of existing and projected land use, with a proposed priority of accomplishment.
2. After the various possibilities have been evaluated by the City and County, detailed design studies, as well as detailed cost and feasibility studies, would have to be made of those locations that seem most desirable. This would be a second phase of the Development Plan.
3. The possibilities outlined could be accomplished by both, or either, public or private action. Public action, in some areas, would stimulate private development. Private action would, of course, be at the discretion of private owners and developers, and would simply be recommended and assisted by public agencies. We believe it is important that the City and County take some action at each station location, in order to stimulate private renewal.
4. The overall aim, as the Report reiterates, is to allow Market Street to take fullest advantage of the BARTD system, to develop functionally and visually as one of the world's great streets.



## LAND USE AND PLAZAS

This portion of the Market Street Development Project has been made a part of a special report, and due to its special characteristics, has been developed as a separate component of the study. Each of the five stations on Market Street has been investigated separately, and street plan proposals have been generally worked out to include the plazas. The proposals are intended as possibilities for area development based on various assumptions related to land use, public acquisitions of properties, and private development. Possible federal government assistance in special areas such as Powell and Fulton Plazas may be available through application to the House and Home Finance Agency for construction grant aid. Plaza proposals may be carried out as special design projects when the scope of the work can be more definitely established and the method of financing determined in the second phase of the Development Plan.

The alternate design proposals for the street are predicated on the plaza development possibilities, and they can be adjusted to these future development potentials. For details of this component of the work, you are referred to the report entitled "Subway Entrance Plazas - Market Street Design, Report No. 2."



## EXISTING MARKET STREET

### Surface Characteristics

Total width - 120 feet

Sidewalks - 22 feet wide each side

Vehicular trafficway - 76 feet wide; generally provides for 8 lanes of traffic

arranged as follows:

2 lanes for streetcars

2 lanes for buses

4 lanes for automobiles, emergency vehicles, and service vehicles

### Evaluation of street in accordance with criteria

1. Business -- While business is flourishing in some areas, the street has steadily degenerated and lost its commercial and business vitality.
2. Pedestrian Circulation -- For the present it is adequate except for the segment between the proposed Montgomery and Powell Plaza stations. The impact of BARTD, however, on the entire street indicates present sidewalks are inadequate in width.
3. Surface Treatment -- The character of the present street has historically been damaged because of the desire to force a maximum amount of functional



services in its limited width. This purely utilitarian approach has restricted the possibilities of providing the comforts and amenities fundamental to the citizens' well being.

4. Transit -- It is self evident that the introduction of mass transit on the street will require radical changes to meet these new forces.
5. Automobiles -- The use of the street as a service corridor to the north of Market area has made it an edge street. The number of automobiles using the street in proportion to the width required is an inefficient use of the street. The automobiles further reduce the efficient movement of transit vehicles, thereby resulting in severe congestion.
6. Safety and Welfare -- People are required to cross traffic lanes to reach extremely narrow islands to board transit vehicles. This creates a hazardous situation. Long cross walks create difficulties for the unification of pedestrian movement on the street. The transit buses, automobiles and service vehicles create an obnoxious atmosphere making hearing difficult because of motor noises. The pollution of the air by automotive vehicles during peak hours in congested areas is a concern to public health.
7. Service -- At the present time the street is used for servicing and delivery of goods. This activity prevents the street from becoming a desired



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DEPARTMENT OF CHEMISTRY

RESEARCH REPORT  
NO. 1000

BY  
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AND  
R. L. BARKER

DEPARTMENT OF CHEMISTRY  
UNIVERSITY OF CHICAGO

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place for large citizen activity. The service to any public area must be secondary to its principal uses. Provision for emergency vehicles appears to be adequate.

8. Utilities -- The street has served the downtown area as a principal trunk line. These utility services represent a substantial investment. They appear along the street as trolley poles, fire hydrants, alarm boxes, etc. These visible utilities contribute to the ugliness of the street.
9. Phasing -- An examination of the street would indicate that orderly growth has not been given consideration. Utilitarian alterations have been made periodically without a comprehensive plan.
10. Future -- The future of Market Street in its deplorable condition is a serious threat to the entire city. These poor environmental characteristics require serious study.



## THE THREE PROPOSALS

### Introduction

All three design proposals show a segment of Market Street beginning at First Street and ending at Mason Street. They include both the Montgomery-Sansome and Powell-Stockton subway stations. The general design proposals have taken this portion of the street as a basis for analysis because of the high density of traffic activity and the subway stations serving the greatest number of pedestrians.

All proposals recommend that 5th Street be extended to Eddy Street and Anna Lane; 7th Street be extended to McAllister; a breakthrough be provided at Grant Avenue into the South of Market Redevelopment area. Proposals for the development of plazas at each of the five subway stations are contained in Report No. 2 of the Urban Consultants' work.

Entrances to rapid transit stations are established  $28\frac{1}{2}$  feet into the street from the property lines of the street in all three proposals.



## DESIGN PROPOSAL A

Description - This plan was originally developed by the Market Street Task Force and has been further developed and detailed in relationship to the criteria. The 120 foot width of the street provides for 18 and 30 foot sidewalk widths alternately arranged. The 72 foot trafficway provides for 2 lanes of surface transit near the curb and 4 lanes of traffic (2 each way) for auto, emergency, vehicles, taxis and delivery service. The surface transit buses will move on and off Market Street onto the side street similar to the existing pattern.

### Evaluation of Proposal

1. Business -- In this plan Market Street remains substantially an edge street of the commercial, business and entertainment areas of the north side, and does not provide for the revitalization of business on the street.
2. Pedestrian Circulation -- Because of the large volumes of pedestrian traffic on the street, the sidewalks would not be of adequate width. Pedestrian congestion would occur around the subway stations entrances and would be of concern to business.
3. Surface Treatment -- Since the sidewalks have been divided at irregular widths to accommodate this plan, the surface treatment would be limited and unattractive. The narrowness of the sidewalks would not permit the





generous connection between the plazas at the various stations to be consistently linked together. Opportunities for the placement of trees, landscaping and various amenities would not be possible because of the limited width of the sidewalks.

4. Transit -- The 3-level mass transit system would be very difficult to coordinate into one continuous system since many of the entrances to the subway stations would only be possible off of side streets, thereby creating congestion on these streets as well as denying the pedestrian the opportunity of using Market Street itself as the natural approach to the mezzanines below. Surface transit could not be comfortably accommodated with appropriate stations and waiting areas to properly complement transit systems below the street.
5. Autos -- The relationship of the auto and transit systems to the pedestrians is not considered to be in proper balance when the auto serves so few people on the street and occupies such a large portion of the street width. This is clearly shown in the visual statistical drawings.
6. Safety -- The narrow sidewalks with high densities of pedestrian traffic, congested approaches to subway entrances and the 6 lanes of moving traffic would present major safety concerns to the citizen.



7. Service -- Service areas are provided at various intervals along the street where side and rear street entrances are not available.
8. Utilities -- It would appear that while utilities can be worked out satisfactorily for this plan, their costs would be quite substantial.
- 9-10. Phasing and Future -- Phasing of growth of the street with 8 lanes of traffic would be difficult to accomplish because of the limited widths of sidewalks. It would only result in continued alterations and restrain imaginative planning.



## DESIGN PROPOSAL B

Description - This plan has been developed by the Urban Consultants in collaboration with the architects for BARTD and to meet the general criteria of subway station design. The 120 foot width of street provides for 35 foot wide sidewalks on each side of the street and a 4 lane 50 foot wide vehicular trafficway. This central strip would include 2 lanes for transit (1 lane each way) to run continuously along the curb. Two lanes are provided for automotive traffic such as delivery service, taxis and emergency vehicles.

The surface transit buses will move on and off Market Street onto the side streets similar to the existing pattern. Opportunities for specially designed transit vehicles to facilitate the moving of large numbers of pedestrians in scale with pedestrian traffic can also be accomplished with further study.

### Evaluation of Proposal

1. Business -- In this proposal Market Street becomes a strong vital link in the downtown area. Business and commerce may expand and develop because of the efficiency of the street and its strong civic quality.
2. Pedestrian Circulation -- Because of the projected large volumes of pedestrians, wide sidewalks will facilitate the movement in comfort and allow for future population growth. Spacious crosswalks are narrowed down across



traffic lanes to permit people to flow back and forth across the street.

3. Surface Treatment -- Because of widened sidewalks it is possible to provide for uniform tree planting, adequate connections to plazas, provisions for functional needs and varied amenities to enrich the surface treatment. Street activity can be developed to complement the various activity areas along the street.
4. Transit -- The increased number of people arriving on Market Street from the lower Municipal Railway and regional transit levels will be reasonably accommodated on the street surface. The generous mezzanines in the station areas will provide adequate access to the street surface. The widened sidewalks will avoid congestion of pedestrians at station entrances. Pedestrians will approach the subway stations from Market Street without being obliged to use side streets.
5. Autos -- The automotive vehicles, transit systems and pedestrian approach a more reasonable balance in their relationship to the use of the street. The reduction of automotive traffic on the street will speed the movement of surface transit, should give more time to people in cross walk areas reducing the waiting time for city traffic across Market Street. This is especially critical to south of Market.





6. Safety and Welfare -- Because of the uninterrupted direct movement of surface transit, reduction of automotive congestion and ease of access to the subway system, safety, and the well being of people should be considerably improved. The environmental quality of the street, compact mezzanines and limited tunnels are important concerns. New York and Chicago have had serious crime problems in subway areas and this should be avoided in San Francisco wherever possible.
7. Service -- Will be provided on peripheral streets where possible, the diagonal streets to the north and alleys to the south. Supplemental loading areas will be provided on Market Street. A service and delivery study is now being made to determine the exact location of these zones.
8. Utilities -- the widened sidewalks should permit a re-evaluation of utilities to place them in the most efficient location complementing the overall design of the street.
9. Phasing -- Since Rapid Transit will stimulate both immediate and long range development, this proposal recognizes street breakthroughs and future traffic and transportation patterns. Future plazas are being coordinated in this basic design. Private enterprise has also been acquainted with the various opportunities presented in this proposal.



10. Future -- This proposal can very well be recognized as the beginning of significant future urban growth. While the plan indicates some limitations, it nevertheless would be an important step in achieving a bold and imaginative design for Market Street.



## DESIGN PROPOSAL C

Description -- The plan has been developed by the Urban Consultants not only to meet the criteria, but also to project into the final phase the ultimate development of Market Street. This proposal develops in more precise detail the basic concept contained in the recently completed Master Plan for Downtown San Francisco. The master plan proposal was developed as a basis for the ultimate development of a complete mass transit street.

The 120 foot width of street provides for 42 foot sidewalks on each side and a 3 lane, 36 foot wide vehicular trafficway. The central strip would include 2 lanes for transit (1 each way) to run continuously along the curb, one lane overlapping into the 2 other lanes for emergency vehicles.

### Evaluation of Proposal

1. Business -- In this proposal Market Street no longer is conceived as a street with sidewalks, but a series of linear plazas flanked by large structures representing the heart of business and commercial activity of the city.



2. Pedestrian Circulation -- The plan envisages providing a maximum of street space for pedestrian circulation. Recognition is made of the enormous populations that regional transit and automotive systems will develop in the downtown area. The unification of the north and south side of the street is brought to its maximum efficiency.
3. Surface Treatment -- The functional needs and urban amenities are exploited to the maximum. The movement of people along the street would unify the plaza and station centers into one homogeneous grand concourse. Planting large trees, landscaping and placing of amenities are made possible.
4. Transit -- The tri-level transit system synchronizing Rapid and Municipal transit with surface transit is brought to its final conclusion. Cross town transit, mini-bus, elephant-train connections would occur at each street intersection. Surface transit would be specifically designed to serve the concourse. Numerous 2-story transit vehicles with open roof decks and low level platforms, to permit shoppers, children and the elderly to board with maximum comfort and speed, are proposed. These colorful, imaginative transit vehicles would be anticipated as an event by the citizen rather than presently hum-drum, uncomfortable transit experiences.





5. Autos -- The auto would be excluded from the street only in its longitudinal direction. Logical automotive connections would be provided at each cross town street. Because of the elimination of the auto from Market Street, the automotive cross town traffic would be accelerated. Parking centers would be provided within short walking distances on both sides of the street.
6. Safety and Welfare -- Because of the clear separation of the automobile from surface transit and the pedestrian, the safety and welfare of people would be substantially improved.
7. Service -- The ability of business and commerce to flourish in such a proposal is a fundamental concern. Therefore service and delivery planning and coordination would be made on peripheral streets as required. Present investigations indicate great potential in this plan and further study of this is underway.
8. Utilities -- The widening of sidewalks to 42 feet quite obviously would simplify the efficient and economical placing of utilities.



9. Phasing -- Such a plan would provide for only the beginning of its tremendous potential. The expansion and growth of this proposal, encouraging penetration of malls, plazas and pedestrian ways in other areas, would be phased as financing and opportunities presented themselves.
10. Future -- The ultimate realization of a 9 county Rapid Transit System, with its vast passenger-carrying capacities in and out of this two mile concourse, must be met by bold and imaginative planning at the outset. Any proposal which does not exploit this great planning opportunity to the maximum would be unfortunate indeed. This once in a lifetime opportunity to construct one of the great streets of modern times should be seriously studied.



## GRAPHIC DATA

The graphic data described in this section of the report is composed of research material, charts, graphs, illustrations, schematics and design proposals which have been developed for the purpose of determining the most appropriate plan for the comprehensive design of the surface of Market Street.

While this basic data is not made a part of the report, reference, however, is made to it for the purpose of orientation. In order to properly understand the recommendations which are made, it is necessary to visually review the supporting data consisting of the following drawings.

### TOPOGRAPHY

Topography of the City of San Francisco  
Contour interval 100 feet

### PERSONS BY AUTO 1961-1964 - PEAK HOUR

Existing volumes of persons by automobile on freeways and major streets  
Data source: San Francisco Bureau of Traffic Engineering

### MAJOR DESIRE LINES 1975

Compares directions people desire to travel in the city indicating  
its impact on the downtown area  
Data source: Trafficways in San Francisco - A Reappraisal 1960

THE  
FEDERAL GOVERNMENT  
OF CANADA  
DEPARTMENT OF THE ARMY  
HEADQUARTERS  
OTTAWA  
ONTARIO  
K1P 5K6  
CANADA

1. The purpose of this document is to provide information regarding the current status of the project and to outline the proposed course of action for the future.

2. The project has been ongoing since the beginning of the year and has made significant progress in the areas of research and development.

3. The following table provides a summary of the key findings from the recent research phase:

| Area        | Findings  |
|-------------|---|
| Research    | Significant progress in understanding the underlying mechanisms of the process. |
| Development | Successful completion of the initial design phase and the start of prototyping. |

4. Based on the findings, it is recommended that the project continue to focus on the areas of research and development, with a view to completing the project by the end of the year.

#### FUTURE RAPID TRANSIT

The routes of planned and possible future BARTD lines and the planned  
Municipal streetcar subway systems  
Data source: BARTD and Municipal Railway

#### FREEWAYS

The routes of existing, planned and possible future freeways in  
San Francisco  
Data source: Trafficways in San Francisco - A Reappraisal 1960

#### PERSONS BY AUTO AND RAPID TRANSIT 1985-90

Compares volume of persons traveling on freeways and rapid transit systems  
P.M. peak hour annual average weekday

#### DAILY TRIPS ACROSS SCREEN LINES 1960, 1985

Existing and projected volumes of persons entering the downtown area  
crossing Van Ness Avenue and James Lick Freeway areas  
Data source: California State Department of Highways

#### EXISTING ONE WAY STREETS

Existing directional system of downtown streets  
Data source: Department of Traffic Engineering

#### STREET CAPACITY MAP

Plan shows varying density of street use by vehicular traffic  
Hour: 4:30 - 5:30 p.m.  
Data source: San Francisco Bureau of Traffic Engineering





#### SCHEMATIC DOWNTOWN FREEWAY SYSTEM

Existing, planned or proposed freeways including Panhandle, Golden Gate and Southern extension

Data source: Department of Highways

#### PARKING SUPPLY AND DEMAND

Compares areas of desired parking and available parking space in the shopping area north and south of Market Street

Projected 1965

Data source: San Francisco Bureau of Traffic Engineering 1954 Report

#### PERSONS BY AUTO 1964

Volume of persons traveling on Market Street by automobile in permitted directions

Hour: 4:30 - 5:30 p.m.

Data source: San Francisco Bureau of Traffic Engineering

#### PERSONS BY BUS AND STREETCAR 1964

Volume of persons traveling down Market Street by bus and streetcar in both directions

Hour: 4:30 - 5:30 p.m.

Data source: Municipal Railway

#### BARTD

Volume of persons traveling under Market Street by BARTD in both directions 1975, 1985-90

Hour: 4:30 - 5:30 p.m.

Data source: BARTD

#### AUTO TURNING MOVEMENT EAST-WEST TRAFFIC ON MARKET STREET

Pattern of permitted auto movement on Market Street

Data source: San Francisco Division of Traffic Engineering



#### BUS MOVEMENT AND LOADING PATTERN 1965

Shows pattern of people boarding and leaving surface transit vehicles  
for length of Market Street  
Afternoon peak hour  
Data source: Municipal Railway

#### PEDESTRIAN FLOW 1964

Existing volumes of pedestrians on Market Street including holiday  
seasonal peaks  
Hour: 4:30 - 5:30 p.m.  
Data source: San Francisco Bureau of Traffic Engineering

#### PEDESTRIAN FLOW 1985-90

Projected volumes of pedestrians on Market Street including seasonal peaks  
with the introduction of BARTD  
Hour: 4:30 - 5:30 p.m.  
Data source: BARTD and San Francisco Bureau of Traffic Engineering

#### PASSENGERS ON MARKET CROSSING 5TH STREET 1964

Volumes of passengers on Market Street in different types of vehicles  
crossing 5th Street at various hours of the day  
Data source: Municipal Railway

#### PERSONS BY MODE OF TRANSPORTATION 1964

Existing volumes of persons on Market Street in various modes of movement  
including automobiles, streetcars, buses and pedestrians  
Hour: 4:30 - 5:30 p.m.  
Data source: Municipal Railway and San Francisco Bureau of  
Traffic Engineering



#### PERSONS BY MODE OF TRANSPORTATION 1975

Projected volumes of persons on Market Street in various modes of movement including BARTD, streetcars, automobiles, buses and pedestrians

Hour: 4:30 - 5:30 p.m.

Data source: Municipal Railway, San Francisco Bureau of Traffic Engineering and BARTD

#### EXISTING USE OF MARKET STREET

Schematic cross section showing existing conditions and usage of the surface of Market Street

Data source: San Francisco Bureau of Traffic Engineering

#### PEDESTRIAN FLOW TO/FROM BARTD

Projected volumes of pedestrians going to and from BARTD

Hour: 4:30 - 5:30 p.m.

Data source: BARTD

#### SCHEMATIC TRANSPORTATION PLAN FOR MARKET STREET

Drawings show the projected pattern of mass transit and pedestrian movement on Market Street indicating the street as a linear station of the downtown area Plan and Longitudinal Section

Data source: Municipal Railway and BARTD

#### MARKET STREET SCHEME A

Represents studies of Market Street by the Task Force

Plan of street from 1st Street to 5th Street

Cross section of street with 6 lanes traffic and various widths of sidewalk

Desirable Sidewalk Capacity Study indicating flow of pedestrian around subway station entrances

Data source: Market Street Task Force



#### MARKET STREET SCHEME B

A possible 4 lane scheme for Market Street with 35' sidewalks  
as suggested by the Board of Supervisors

Plan of street from 1st Street to 5th Street

Cross section

Desirable sidewalk capacity study indicating flow of pedestrian around  
subway station entrances

Detailed Plan of Market Street between 4th and 5th Streets

#### MARKET STREET SCHEME C

A possible 3 lane scheme for Market Street without automobile traffic  
or truck servicing from Market Street

Plan of street from 1st Street to 5th Street

Cross section showing 42' sidewalks and 3 lanes of traffic

Detailed Plan of Market Street between 4th and 5th Streets

#### BAY REGION GROWTH - RAPID TRANSIT VOLUMES

Compares population growth of the counties around San Francisco with  
the future expansion of the BARTD system

Date source: BARTD and U.S. Corps of Engineers

#### MARKET STREET DECISION

Identifies the various considerations affecting the design of  
Market Street





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